

**Listing and Amendments to the Claims**

This listing of claims will replace the claims that were published in the PCT Application and annexed to the International Preliminary Report on Patentability:

1. (currently amended) Device for generating a look-up table for a given value (~~VAL~~) of a parameter (~~APL~~) among N different values, whose output values can be approximated by a piecewise linear function of a variable (~~S(VAL)~~) depending on the given value, the set of N values being divided into P subsets of consecutive values, each piece of the piecewise linear function being in a different subset, wherein ~~characterized in that it~~ comprises:

- a first memory (~~101~~) for storing, for each subset i, a primary look-up table (~~PMTGi~~) associated to a bound value of the subset i,

- a second memory (~~102~~) for storing, for each subset i, a delta look-up table corresponding to the difference between a secondary look-up table (~~SMTGi~~) and the primary look-up table (~~PMTGi~~) related to the subset i, the secondary look-up table (~~SMTGi~~) being associated to the other bound value of the subset i,

- a third memory (~~103~~) for storing , for each of said N values, an index indicating which primary look-up table in the first memory (~~101~~) and which delta look-up table in the second memory (~~102~~) have to be used for extrapolation,

- a fourth memory (~~104~~) for storing an extrapolation coefficient (~~G~~) for each one of said N values, the extrapolation coefficient (~~G(VAL)~~) associated to a given value being defined in accordance with the value (~~S(VAL)~~) of a variable S for said given value (~~VAL~~) and the values (~~S(PMTGi)~~, ~~S(SMTGi)~~) of the variable S for the two bound values of the subset i comprising said given value; and

- a computing block (~~105~~) for generating a look-up table, for the given value (~~VAL~~) in accordance with the related extrapolation coefficient (~~G(VAL)~~), primary look-up table (~~PMTGi~~) and delta look-up table.

2. (currently amended) Device according to claim 1, wherein ~~characterized in that~~ the parameter is an average power level and the variable  $\{S(\text{VAL})\}$  is a number of sustain pulses corresponding to the given value  $\{\text{VAL}\}$  of the parameter

and ~~that it generates~~ a Metacode look-up table is generated for each average power level value.

3. (currently amended) Device according to claim 2, wherein ~~characterized in that~~ the bound level related to the primary look-up table  $\{\text{PMTCi}\}$  of a subset of average power level values is the highest average power level value of the subset and the bound level related to the secondary look-up table  $\{\text{SMTCi}\}$  of a subset of average power level values is the lowest average power level value of the subset.

4. (currently amended) Device Method according to ~~one of the~~ claims 1 ~~to 3~~, wherein ~~characterized in that~~ the ratio between the value  $\{S(\text{PMTCi})\}$  of the variable for one bound value in the subset  $i$  and the value  $\{S(\text{PMTCi}+1)\}$  of the variable for the same bound value in the subset  $i+1$  equals to a fixed parameter  $\alpha$ .

5. (currently amended) Device according to the claim 4, wherein ~~characterized in that~~ the parameter  $\alpha$  is defined as followed :  $\alpha = \sqrt[N]{\frac{S_{\text{MAX}}}{S_{\text{MIN}}}}$

where  $S_{\text{MAX}}$  is the value of the variable  $\{S\}$  for a peak white image and  $S_{\text{MIN}}$  for a full white image.

6. (currently amended) Device according to ~~one of the~~ claims 1 to 5, wherein ~~characterized in that~~ the extrapolation coefficient (~~C(V<sub>AL</sub>)~~) equals to :

$$C(V_{AL}) = \frac{S(V_{AL}) - S(PMTC_i)}{S(SMTC_i) - S(PMTC_i)}$$

where -  $S(PMTC_i)$  is the value of the variable for the highest bound value of the subset i;

-  $S(SMTC_i)$  is the value of the variable for the lowest bound value of the subset i; and

-  $S(V_{AL})$  is the value of the variable for the given value.

7. (currently amended) Device according to ~~one of the~~ claims 1 to 6, wherein ~~characterized in that~~ the computed look-up table equals to the sum of the output of the primary look-up table (~~PMTC<sub>i</sub>~~) for the given value (~~V<sub>AL</sub>~~) and the output of the delta look-up table (~~PMTC<sub>i</sub>~~) for the given value (~~V<sub>AL</sub>~~) weighted by the extrapolation coefficient for the given value (~~V<sub>AL</sub>~~).